

REMARKS

Claims 1, 3-5, 7-10, 12-13, 15-19 and 21-22 remain pending in the present application, of which claims 1, 9 and 17 have been amended. Claims 6, 14 and 20 have been cancelled without prejudice or disclaimer of the subject matter therein. It is respectfully submitted that the pending claims define allowable subject matter.

In response to the indefiniteness rejection under 35 USC §112, second paragraph, claims 2 and 11 were canceled in the previous response. It is believed that no other claim amendments are needed as the pending claims do not recite the objectionable phrase.

Claims 1, 3-10 and 12-23 have been rejected under 35 USC §103(a) as being unpatentable over Davis (USP 5,540,598) in view of Zell. (USP 4,173,387). Applicants respectfully traverse these rejections for reasons set forth hereafter.

First, Applicants submit that the combination of Davis and Zell is improper since the person of ordinary skill would not have been motivated to modify Davis' keying post 18 to resemble Zell's mounting legs 20, 22, 40 and 42 (hereafter collectively referred to simply as the mounting legs 20). Davis's keying post 18 is shaped as it is for a particular reason, namely to align the orient as well as to mount the housing 2 with the bottom of the housing 2 against the circuit board 23 (col. 3, lines 6-10).

The substitution of Zell's mounting legs 20 for Davis' keying post 18 would detract from, and prevent, one of the primary objectives of Davis's connector. As previously noted, Davis explains the following:

The circumference of each post receiving opening 32 as well as a circumference circumscribed by the post gripping guides 33, both, are larger than the smaller circumference of a corresponding keying post 18, to allow significant lateral movement of the pin spacer 28 while received over the smaller circumference of each keying post 18. Such lateral movement enables the pin spacer 28 to deflect misaligned pin positions 22 into alignment without undue restriction of such movement by the keying post 18 (col. 4, lines 1-9).

Hence, a particular necessary and fundamental feature of Davis's invention is the ability to permit the pin spacer 28 to laterally move with respect to the housing 2 during connection. Zell's mounting posts 20 include detent shoulders 28 and 30 on opposite sides thereon directly across from one another. The inclusion of detent shoulders 28 and 30 on a post replacing Davis' keying post 18 would interfere with Davis' alignment process. Davis explains the alignment process at length in the detailed description as it is a fundamental part of Davis' invention.

The person of ordinary skill would not add Zell's detent shoulders 28 and 30 to post replacing Davis' keying post 18 since the detent shoulders 28 and 30 would interfere with Davis' alignment process as the detent shoulders 28 and 30 passed through the openings 32. Davis' gripping guides 33 in the openings 32 would unevenly contact the detent shoulders 28 and 30, thereby causing the pin spacer 28 of Davis to shift laterally during the alignment process. This would introduce the potential for alignment errors between the contacts 20 and the pin spacer 28.

It is submitted that no reason exists for the person of ordinary skill to modify Davis' system in the manner suggested in the Office Action absent an advantage (i.e. motivation) that would justify the introduction of the potential for alignment error. Applicants strongly maintain that no such advantage has been given, nor does such an advantage exist. Hence, the person of ordinary skill would not have been motivated to incorporate the suggested features from Zell's connector into Davis's system as such a modification would directly contradict an objective of Davis's invention.


Further, Zell's connector does not include a pin spacer and thus is not concerned with the alignment issues of Davis. The absence of a pin spacer from Zell's connector simply highlights the divergence in the problems and objectives of Davis and Zell.

Moreover, it is submitted that the prior art fails to teach or suggest the claimed locking post and the manner by which it cooperates with both a contact guide and a substrate. Notwithstanding the foregoing, claims 1, 9 and 17 have been amended to incorporate the limitations of dependent claims 6, 14 and 20, respectively, among other things. Claims 1, 9 and 17 now define locking post to include, among other things, first and second legs of different lengths that are compressible toward one another to allow the locking post to be inserted in the aperture in the substrate. By staggering the lengths of the legs, the claimed locking posts avoid the misalignment concerns discussed above. The prior art fails to teach or suggest the locking post as claimed. Davis' keying post 18 is not bifurcated. Zell's mounting legs 20 include leg portions 24 and 26 of the same length.

In view of the foregoing, it is respectfully submitted that the person of ordinary skill would not have been motivated to modify Davis's system based upon the teachings of Zell in a manner that would render obvious the claimed invention, including, among other things, the claimed locking post with distal ends that are snapably secured to the substrate.

In view of the foregoing, it is respectfully submitted that the pending claims define allowable subject matter. If anything remains in order to place the present application in condition for allowance, the Examiner is kindly invited to contact the undersigned at the telephone number listed below.

Respectfully Submitted,



Bruce T. Atkins
Registration No. 43,476
ARMSTRONG TEASDALE LLP
One Metropolitan Square, Suite 2600
St. Louis, Missouri 63102-2740
(314) 621-5070



APPENDIX

Version with Markings to Show Changes Made

1. (Amended) An electrical connector of a type which is connectable to a substrate, comprising:

a housing;

a plurality of electrical contacts carried by the housing, each contact having a contact interface interconnectable with a reciprocal contact interface carried by the substrate;

a contact guide having a plurality of apertures positioned to align and mate with the contact interfaces of the contacts; and

the housing including a locking post configured to mate with reciprocal apertures formed in both the contact guide and the substrate for securing both the contact guide and the substrate to the housing, the locking post having a base portion that is secured within the reciprocal apertures in the contact guide and having at least one bifurcated post with first and second opposed legs of different lengths which are compressible towards one another for insertion into the reciprocal aperture in the substrate, the locking post having a locking feature on a distal end thereof, the locking feature being snapably secured within the reciprocal aperture in the substrate.

9. (Amended) An electrical connector, comprising:

a housing having a substrate end mateable with a substrate and a connector end mateable with a second electrical connector;

a plurality of electrical contacts carried by the housing, each contact having a first contact interface positioned in the substrate end of the housing for interconnection with a reciprocal

contact interface carried by the substrate and a second contact interface positioned in the connector end of the housing for interconnection with a reciprocal contact interface carried by the second electrical connector;

a contact guide configured to mate with the substrate end of the housing, the contact guide including a plurality of apertures positioned to matingly align with the first contact interfaces; and

a locking post having a base portion securing the housing to the contact guide and and having a distal portion with first and second opposed legs of different lengths that are compressible towards one another to allow the locking post to be inserted into the reciprocal aperture in the substrate, said distal portion snapably securing the housing to the substrate.

17. (Amended) An electrical connector, comprising:

a housing having a substrate end mateable with a substrate and a connector end mateable with a second electrical connector;

a plurality of electrical contacts carried by the housing, each contact having a first contact interface positioned in the substrate end of the housing for interconnection with a reciprocal contact interface carried by the substrate and a second contact interface positioned in the connector end of the housing for interconnection with a reciprocal contact interface carried by the second electrical connector;

a contact guide configured to mate with the substrate end of the housing, the contact guide including a plurality of apertures positioned to matingly align with the first contact interfaces; and

first and second posts extending from the housing, each of the first and second posts having a base portion configured to mate with a reciprocal aperture formed on the contact guide

and a distal portion configured to snapably mate with a reciprocal aperture formed on the substrate for securing the housing to both the contact guide and the substrate, respectively, wherein each of the first and second posts has first and second opposed legs of different lengths that are compressible towards one another to allow the first and second posts to be inserted into reciprocal apertures in the substrate.